wherein said method is carried out in the presence of a 4-hydroxyphenylpyruvate dioxygenase (HPPD) inhibitor in said suitable reaction medium.

Cancel claim 11 without prejudice.

Add the following new claims:

12. (new) Method according to one of Claims 1 to 8, characterized in that both enzymatic reactions are carried out in the same reaction medium containing HPP, the two suitable enzymes being present together at the same time in the reaction medium.

13. (new) Method according to one of claims 1 to 8 or 12, characterized in that the two suitable enzymes are introduced into the suitable reaction medium in the form of protein extracts, or alternatively they can be produced in situ by suitable biological organisms.

**REMARKS**

The Office Action of May 21, 2002 has been carefully considered and the following response prepared. Claims 1-8 and 11 are pending in the application. Claim 1 has been amended. Claim 11 has been canceled without prejudice. New claims 12 and 13 have been added.

Applicants request entry of the amendments to claim 1 and the addition of new claims 12 and 13. The amendments to claim 1 delete the phrase "in a plant cell modified to produce a first suitable enzyme ... converts HPA into HMO", placing claim 1 in the form originally filed, and add the limitation of claim 11 that the method is carried out in the presence of an HPPD inhibitor in the suitable reaction medium. Applicants believe these amendments place the claims in allowable condition, or at least better form for appeal and raise no new issues.

New claims 12 and 13 are identical to originally filed claims 9 and 10, respectively, that were canceled without prejudice in Applicants' response to the previous Office Action. These claims therefore also raise no new issues.

Claim 1 as presently amended 1 is not anticipated or rendered obvious by any of the references cited against the claims in the previous Office Action mailed October 26, 2001. Claim 1 is drawn to a method for enzymatic preparation of homogentesic acid (HMO) from

4-hydroxypyruvate (HPP), which is carried out in a suitable reaction medium that contains an HPPD inhibitor. None of the previously cited references, alone or in combination, discloses or suggests the claimed method of producing homogentisate wherein an HPPD inhibitor is present in the reaction medium. Claims 2-8, 12 and 13 depend directly or indirectly from claim 1 and are also not anticipated or rendered obvious for the same reasons.

Turning now to the rejections in the present Office Action, at page 2 of the Office Action, the Examiner rejected claims 1-8 and 11 under 35 USC 112, first paragraph for failing to provide an adequate written description of the invention.

This rejection is moot in view of the amendment to claim 1 deleting the phrase "a plant cell modified to produce a first suitable enzyme ... converts HPA into HMO" and withdrawal of this rejection is requested.

At page 3 of the Office Action, the Examiner rejected claims 1-8 and 11 under 35 USC 112, second paragraph as indefinite. The Examiner indicated that claim 1 is vague, indefinite and confusing in the phrase "characterized in that it consists in carrying out in a plant cell modified to produce a first suitable enzyme ... and a second suitable enzyme. The Examiner also stated that claims 3-4, 6-8 and 11 are vague and indefinite in failing to find proper antecedent basis in claim 1 for HPP oxidase and HPA-hydroxylase that originates from bacteria that can grow on HPA as the only carbon source because claim 1 is directed to a modified plant as the enzyme producer. The Examiner further indicated claim 11 is confusing because the phrase "in the presence of an HPPD inhibitor" is unclear as what is intended because the nature of an HPPD inhibitor is uncertain and it cannot be ascertained what constitutes "a suitable reaction medium" for an unknown substance in a plant cell.

This rejection is also moot in view of the amendment to claim 1 deleting the phrase "a plant cell modified to produce a first suitable enzyme ... converts HPA into HMO". Claim 11 has been canceled without prejudice and the limitations of claim 11 added to claim 1.

HPPD inhibitors are discussed in the specification at pages 1-2. HPPD refers to 4-hydroxyphenylpyruvate dioxygenase. Inhibitors of this enzyme are herbicidal compounds that block the production of HMO in plant cells. The HPPD inhibitor 4-[-4-trifluoromethyl-2-(methylsulfonyl)benzoyl]-5-cyclopropylisoxazole is disclosed in Examples 1 and 2. As discussed in the specification at page 4, the enzymes employed in the methods of the

invention are insensitive to HPPD inhibitors and the method of the invention can be performed in the presence of an HPPD inhibitor in the suitable reaction medium.

In view of the above, the present application is believed to be in a condition for allowance. Entry of the amendments to claim 1 and the addition of new claims 12 and 13 is requested. Applicants believe the amendments to claim 1 place it in condition for allowance, or at least in better form for appeal and raise no new issues. New claims 12 and 13 also raise no new issues. Reconsideration of the application is requested and an early Notice of Allowance is earnestly solicited.

Respectfully submitted,
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**Appendix A**

**Marked up amended claims**

1. (twice amended) Method for enzymatic preparation of homogentisate (HMO) from 4-hydroxypyruvate (HPP), characterized in that it consists in carrying out [in a plant cell modified to produce a first suitable enzyme that converts HPP to 4-hydroxyphenylacetate (HPA) and a second suitable enzyme that converts HPA into HMO], in a suitable reaction medium, the following enzymatic reactions:

- enzymatic conversion of HPP into 4-hydroxyphenylacetate (HPA) [HPA] with a first suitable enzyme, then
- enzymatic conversion of HPA into HMO with a second suitable enzyme,

wherein said method is carried out in the presence of a 4-hydroxyphenylpyruvate dioxygenase (HPPD) inhibitor in said suitable reaction mixture.